

We Claim

1. A hydrogen generator system comprising:
 - a first container, said first container having at least one side;
 - a second container, said second container having at least one side;
 - a catalyst system, said catalyst system being in fluid communication with said first container and said second container;
 - a pumping system, said pumping system being in fluid communication with said catalyst system;

wherein at least a portion of said at least one side of said first container is shared with at least a portion of said at least one side of said second container thereby defining a shared partition, and

wherein at least a portion of said shared partition is flexible.
2. The hydrogen generator system according to claim 1, wherein said flexible portion of said shared partition includes folding portions.
3. The hydrogen generator system according to claim 1, wherein said flexible portion of said shared partition includes telescoping portions.
4. The hydrogen generator system according to claim 1, wherein said first container is a fuel container and said second container is a spent fuel container.

5. The hydrogen generator system according to claim 4, further comprising a pressure switch, said pressure switch being in fluid communication with said spent fuel container and in communication with said pumping system.

6. The hydrogen generator system according to claim 4, further comprising a hydrogen container in fluid communication with said spent fuel container.

7. The hydrogen generator system according to claim 1, further comprising a hydrogen container, said hydrogen container being in fluid communication with said catalyst chamber.

8. The hydrogen generator system according to claim 1, wherein said catalyst chamber has a hydrogen generator catalyst for reacting with a hydride solution to create hydrogen.

9. The hydrogen generator system according to claim 8, wherein said hydride solution is a metal hydride solution.

10. The hydrogen generator system according to claim 9, wherein said metal hydride solution is a sodium borohydride solution.

11. A hydrogen generator system comprising:

a first container, said first container having at least one side;

a second container, said second container having at least one side, wherein said second container is contained at least partially within said first container, and wherein at least a portion of said at least one side of said second container is outside said first container, thereby defining an outside portion;

a catalyst system, said catalyst system being in fluid communication with said first container and said second container;

a pumping system, said pumping system being in fluid communication with said catalyst system; and

a spent fuel line, said spent fuel line being in fluid communication with said catalyst system and at least a portion of said spent fuel line being wrapped around at least a portion of said outside portion of said second container.

12. The hydrogen generator system according to claim 11, wherein said first container has a first perimeter and said second container has a second perimeter, and said second perimeter being less than said first perimeter whereby said spent fuel line being wrapped around said outside portion of said second container does not extend beyond said first perimeter.

13. The hydrogen generator system according to claim 11, further comprising an insulated area covering at least a portion of said outer surface area and interposed as least between said outside portion of said second container and at least a portion of said spent fuel line.

14. The hydrogen generator system according to claim 11, wherein said first container is a fuel container, said second container is a spent fuel container and said spent fuel line is in fluid communication with said spent fuel container.

15. The hydrogen generator system according to claim 11, wherein said second container is a fuel container, said first container is a spent fuel container and said spent fuel line is in fluid communication with said spent fuel container.

16. The hydrogen generator system according to claim 14, further comprising a pressure switch, said pressure switch being in fluid communication with said spent fuel container and in communication with said pumping system.

17. The hydrogen generator system according to claim 11, further comprising a hydrogen container in fluid communication with said spent fuel container.

18. The hydrogen generator system according to claim 11, further comprising a hydrogen container, said hydrogen container being in fluid communication with said catalyst chamber.

19. The hydrogen generator system according to claim 11, wherein said catalyst chamber has a hydrogen generator catalyst for reacting with a hydride solution to create hydrogen.

20. The hydrogen generator system according to claim 17, wherein said hydride solution is a metal hydride solution.

21. The hydrogen generator system according to claim 18, wherein said metal hydride solution is a sodium borohydride solution.

22. A hydrogen generator system comprising:

- a first container;
- a second container;
- a catalyst system, said catalyst system being in fluid communication with said first container and said second container;
- a pumping system, said pumping system being in fluid communication with said catalyst system; and
- a spent fuel line, said spent fuel line being in fluid communication with said catalyst system and at least a portion of said spent fuel line being wrapped around at least a portion of said outside portion of said second container,
wherein said catalyst system and said pumping system are disposed between said first container and said second container.

23. The hydrogen generator system according to claim 22 further comprising a transportation cart having a frame, a back, at least one support band and a plurality of wheels, wherein said back and said at least one support band support said first container and said second container..

24. The hydrogen generator system according to claim 22 wherein said back is comprised or a plurality of support struts and a plurality of vertical braces.

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